



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

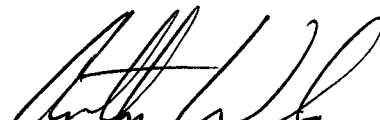
Sent To: Steve Roberts
TDEC-DWS
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00003376
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.



Analytical Supervisor

Lab-Sample Number: K00003376001
Project Name:
Sample Description: Kingston WTP Finish
Sampler Project Name: Finish
Project Site No.:
Station No.:
Date/Time Collected: 02/08/2010 08:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/11/2010				A Wilson	2/11/2010

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/12/2010
Barium	18	µg/L	2.5	5	M Pattanayek	2/12/2010
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/12/2010
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/12/2010
Chromium	U	µg/L	2.0	5	M Pattanayek	2/12/2010
Cobalt	0.059J	µg/L	0.04	1	M Pattanayek	2/12/2010
Lead	U	µg/L	0.10	1	M Pattanayek	2/12/2010
Manganese	U	µg/L	0.42	1	M Pattanayek	2/12/2010
Selenium	U	µg/L	1.3	5	M Pattanayek	2/12/2010
Thallium	0.091J	µg/L	0.03	1	M Pattanayek	2/12/2010
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/12/2010

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	2/12/2010

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003376002
Project Name:
Sample Description: Kingston WTP Raw
Sampler Project Name: Raw
Project Site No.:
Station No.:
Date/Time Collected: 02/08/2010 08:35
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
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Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/11/2010				A Wilson	2/11/2010

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/12/2010
Barium	21	µg/L	2.5	5	M Pattanayek	2/12/2010
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/12/2010
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/12/2010
Chromium	U	µg/L	2.0	5	M Pattanayek	2/12/2010
Cobalt	0.24J	µg/L	0.04	1	M Pattanayek	2/12/2010
Lead	0.54J	µg/L	0.10	1	M Pattanayek	2/12/2010
Manganese	40	µg/L	0.42	1	M Pattanayek	2/12/2010
Selenium	U	µg/L	1.3	5	M Pattanayek	2/12/2010
Thallium	0.053J	µg/L	0.03	1	M Pattanayek	2/12/2010
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/12/2010

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	2/12/2010

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003376003
Project Name:
Sample Description: Rockwood WTP Finish
Sampler Project Name: Finish
Project Site No.:
Station No.:
Date/Time Collected: 02/08/2010 09:05
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
Received By: E McCrary

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/11/2010				A Wilson	2/11/2010

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/12/2010
Barium	27	µg/L	2.5	5	M Pattanayek	2/12/2010
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/12/2010
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/12/2010
Chromium	U	µg/L	2.0	5	M Pattanayek	2/12/2010
Cobalt	0.045J	µg/L	0.04	1	M Pattanayek	2/12/2010
Lead	U	µg/L	0.10	1	M Pattanayek	2/12/2010
Manganese	U	µg/L	0.42	1	M Pattanayek	2/12/2010
Selenium	U	µg/L	1.3	5	M Pattanayek	2/12/2010
Thallium	0.034J	µg/L	0.03	1	M Pattanayek	2/12/2010
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/12/2010

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	2/12/2010

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00003376004
Project Name:
Sample Description: Rockwood WTP Raw
Sampler Project Name: Raw
Project Site No.:
Station No.:
Date/Time Collected: 02/08/2010 09:10
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/11/2010				A Wilson	2/11/2010

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/12/2010
Barium	28	µg/L	2.5	5	M Pattanayek	2/12/2010
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/12/2010
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/12/2010
Chromium	U	µg/L	2.0	5	M Pattanayek	2/12/2010
Cobalt	0.080J	µg/L	0.04	1	M Pattanayek	2/12/2010
Lead	0.15J	µg/L	0.10	1	M Pattanayek	2/12/2010
Manganese	9.8	µg/L	0.42	1	M Pattanayek	2/12/2010
Selenium	U	µg/L	1.3	5	M Pattanayek	2/12/2010
Thallium	0.030J	µg/L	0.03	1	M Pattanayek	2/12/2010
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/12/2010

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Wilson	2/12/2010

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected



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Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00003376001
Project Name:
Sample Description: Kingston WTP Finish
Sampler Project Name: Finish
Project Site No.:
Station No.:
Date/Time Collected: 02/09/2010 08:30
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
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Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: SM 2320 B					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	53	mg/L	1	1	M Chen	2/11/2010	

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	40	mg/L	1	1	M Chen	2/10/2010	

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00003376002
Project Name:
Sample Description: Kingston WTP-Raw
Sampler Project Name: Raw
Project Site No.:
Station No.:
Date/Time Collected: 02/09/2010 08:35
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: SM 2320 B				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	51	mg/L	1	1	M Chen	2/11/2010

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	41	mg/L	1	1	M Chen	2/10/2010

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00003376003
Project Name:
Sample Description: Rockwood WTP Finish
Sampler Project Name: Finish
Project Site No.:
Station No.:
Date/Time Collected: 02/09/2010 09:05
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
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Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
Received By: E McCrary

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: SM 2320 B				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	66	mg/L	1	1	M Chen	2/11/2010

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	53	mg/L	1	1	M Chen	2/10/2010

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00003376004
Project Name:
Sample Description: Rockwood WTP-Raw
Sampler Project Name: Raw
Project Site No.:
Station No.:
Date/Time Collected: 02/09/2010 09:10
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Drinking Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
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Priority Date: 02/19/2010
Date/Time Received: 02/09/2010 14:10
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: SM 2320 B				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	72	mg/L	1	1	M Chen	2/11/2010

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	51	mg/L	1	1	M Chen	2/10/2010

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected